CLAIMS

1. A torsional damper pulley comprising a hub fixed at a revolving shaft of an internal combustion engine, an annular pulley body substantially rectangular in section, which is coaxially placed outside said hub in its diameter direction, has a pulley groove at an outer circumferential portion and has a predetermined inertia mass, and an elastic solid interposed between an outer circumferential surface of said hub and an inner circumferential surface of said pulley body,

wherein said pulley body comprises an annular frame substantially U-shaped in section, which has a concave portion open in its axial direction and has a pulley groove at an outer circumferential portion, and an annular inertia mass element fixed in said concave portion.

2. The torsional damper pulley according to claim 1, wherein said inertia mass element is formed by overlaying a plurality of annular plates on each other and bonding them.

3. The torsional damper pulley according to claim 2, wherein cut-and-bent pieces are formed on a surface of said annular plate with spaces between them in a circumferential direction, and by overlaying a plurality of annular plates on each

other so that the cut-and-bent pieces are overlaid on each other and pressing them, said plurality of annular plates are bonded.

4. The torsional damper pulley according to claim 2, wherein dowels protruded from one surface of said annular plate to the other surface are formed on said annular plate with spaces between them in a circumferential direction, and by overlaying a plurality of annular plates on each other so that the dowels are displaced in the circumferential direction and pressing them, said plurality of annular plates are bonded.

5. The torsional damper pulley according to claim 4, wherein a convex portion of said dowel is formed to be narrower than a concave portion.

6. The torsional damper pulley according to any one of claims 2 to 5, wherein said annular plate is formed by joining a plurality of arc-shaped ring pieces in an annular form.

7. The torsional damper pulley according to claim 6, wherein a plurality of ring pieces are placed in an annular form, and by close-fitting a protruded piece formed at one end of one ring piece of the adjacent ring pieces into a hole formed at a corresponding one end of the other ring piece, a plurality of ring pieces are joined in the annular form.

8. The torsional damper pulley according to claim 7, wherein a concave portion is formed at least at one side of a base portion of the protruded piece of said ring piece, and a protruded portion fitted in the concave portion is formed at a corresponding side of an open end of said hole.

9. The torsional damper pulley according to any one of claims 2 to 8, wherein said inertia mass element comprises an annular plate having an inner diameter to be in pressure-contact with an inner surface of the inner circumferential wall for defining the concave portion of said pulley body, and said inertia mass element is fixed by being press-fitted into said concave portion.

10. The torsional damper pulley according to any one of claims 2 to 8, wherein said inertia mass element comprises an annular plate having an outer diameter to be in pressure-contact with an inner surface of an outer circumferential wall for defining the concave portion of said pulley body, and said inertia mass element is fixed by being press-fitted into said concave portion.

11. The torsional damper pulley according to any one of claims 2 to 8, wherein said inertia mass element comprises a first

annular plate having an outer diameter to be in pressure-contact with an inner surface of an outer circumferential wall for defining the concave portion of said pulley body, and a second annular plate having an inner diameter to be in pressure-contact with an inner surface of an inner circumferential wall for defining said concave portion, and said inertia mass element is fixed by being press-fitted into said concave portion.

12. The torsional damper pulley according to any one of claims 2 to 8, wherein said inertia mass element is fixed to the concave portion of said pulley body with fastening means including a bolt.

13. The torsional damper pulley according to any one of claims 2 to 8, wherein convex portions outward or inward in a diameter direction are provided at the same positions in a width direction of the outer circumferential portion of said hub and an inner circumferential wall for defining a concave portion of said pulley body.

14. The torsional damper pulley according to any one of claims 2 to 8, wherein a wall portion for connecting an inner circumferential wall and an outer circumferential wall for defining the concave portion of said pulley body is omitted, whereby said concave portion is formed to be a through-hole open

to both sides in an axial direction, said inertia mass element is formed by overlaying a plurality of annular plates on each other and bonding them so that at least one annular plate having an inner diameter and outer diameter to be in pressure-contact with said inner circumferential wall and outer circumferential wall is placed, and said inertia mass element is press-fitted into said through-hole.